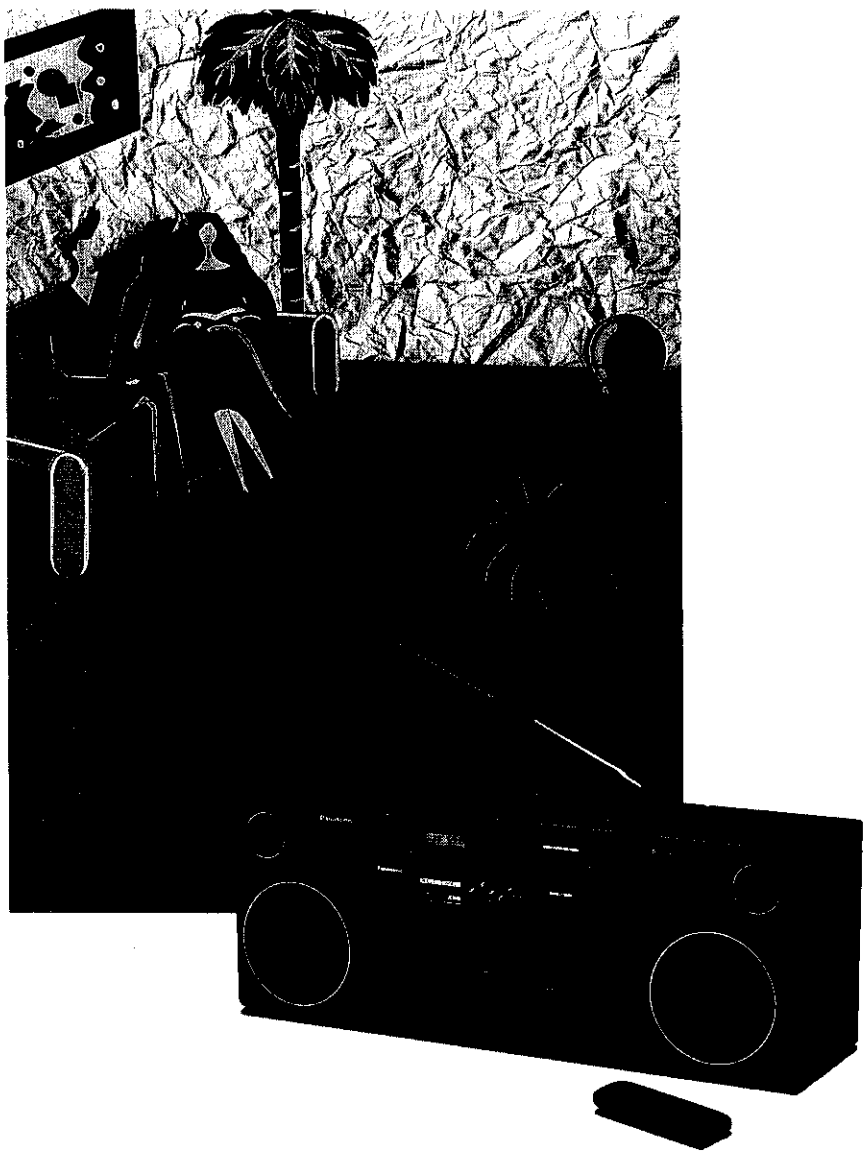
Panasonic®

Portable Stereo Component System

RX-DT650

Operating Instructions



Before connecting, operating or adjusting this product, please read these instructions completely.

COMPACT disc DIGITAL AUDIO

RQT2839-B

Dear Customer

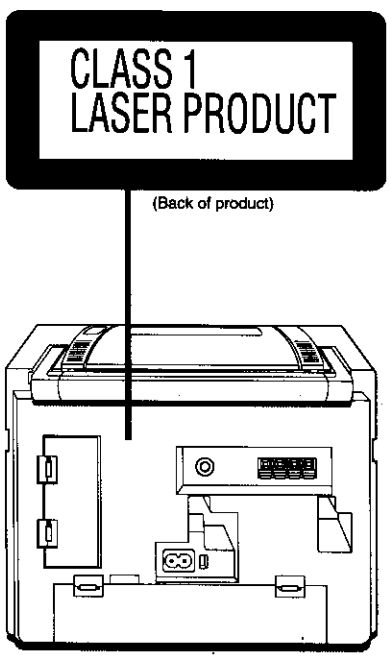
Thank you for purchasing this system.
For optimum performance and safety, please read these instructions carefully.

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.



(Back of product)

DANGER	INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTÖNTA LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.
ADVARSEL	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.

(Inside of product)

(Indersiden at apparatet)

(Tuotteen sisällä)

(Apparatens insida)

(Produktets innside)

(Im Inneren des Gerätes)

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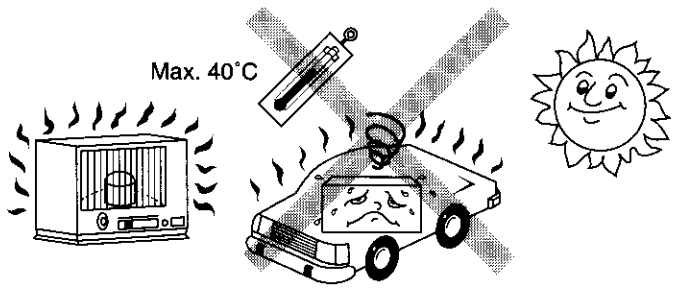
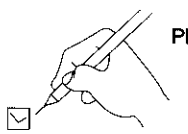
Precautions

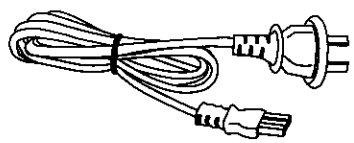
- **If the set is not used for a long period of time or is used only from an AC power source, remove all the batteries to prevent potential damage due to possible battery leakage.**
- Avoid using or placing this unit near sources of heat. Do not leave it in an automobile exposed to direct sunlight for a long time with the doors and windows closed as this may deform the cabinet.
- Avoid cuts, scratches, or poor connections in the AC power cord, as they may result in possible fire or electric shock hazard. Also, excessive bending, pulling or splicing of the cord should be avoided.
- Do not unplug the AC power cord by pulling on the cord. To do so may cause premature failure or shock hazard.
- Do not operate the set on AC power in a bathroom, as a potential shock hazard may result.
- When not in use, disconnect the AC power cord from the household AC outlet.



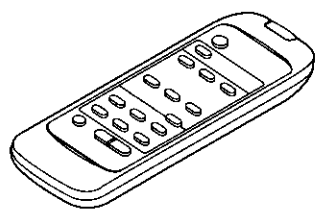
Supplied Accessories



Please check and identify the supplied accessories.



☐ AC power cord ..... 1 pc.

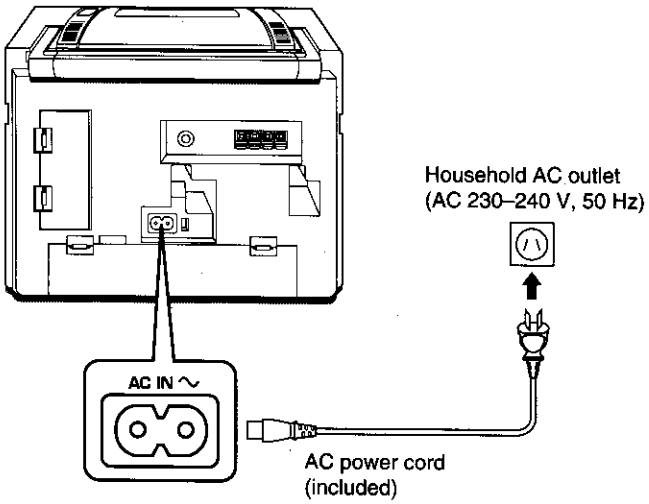


☐ Remote control transmitter ..... 1 pc.
(EUR643821)

Power Sources

To operate AC power

Connect the included AC power cord to the AC socket of this unit and your household AC outlet.

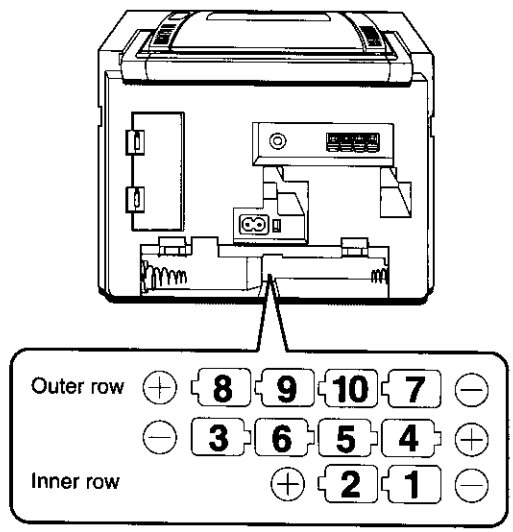


To operate on battery power

When using the memory back-up batteries (see the next page), insert them first.
Please read "Use of batteries" on page 7.

Battery installation

Unplug the AC power cord from the household AC outlet and the AC socket of the unit.
Insert ten R20/LR20 (UM-1 or equivalent, not included) batteries into the battery compartment, making sure that the batteries are installed in the designated numerical order and that the proper polarities are maintained.



- Batteries installed with incorrect polarities may leak and damage this unit.
- Do not mix batteries (old and new) or types (manganese and alkaline, etc.).
- If the unit is not used for a long period of time or is used only from an AC power source, remove the batteries to prevent potential damage from possible battery leakage.

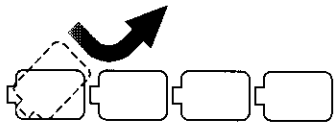
Battery life

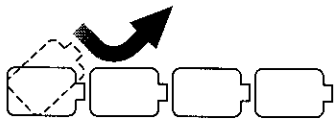
When to replace the batteries:
When the POWER/BATT STDBY ⏻ indicator goes off (or dims) during play, replace all the batteries with new ones. If you continue using the batteries, it will automatically turn itself off.

Battery removal

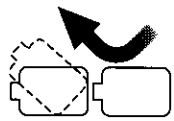
Remove as shown in the figure below.

Outer row





Inner row

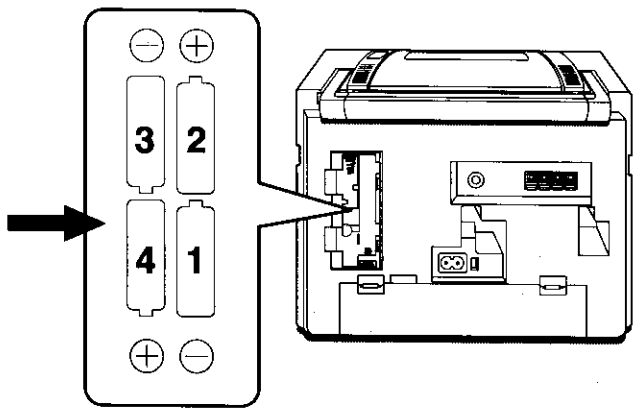


Memory back-up batteries

In the event of a power failure, or if the AC power cord is disconnected from the household AC power outlet (during AC operation), or should the batteries fail, the memory back-up batteries will preserve the preset memory of this unit.
Please read "Use of batteries" on page 7.

Battery installation

Insert four R6/LR6 (UM-3 or equivalent, not included) batteries into the battery compartment, making sure that the batteries are installed in the designated numerical order that the proper polarities are maintained.



Battery removal

Press the ⊖ side of the battery No. 4.

Battery life

The life of the memory back-up batteries is about one year.

- The life of the memory back-up batteries can be prolonged by keeping the AC power cord plugged in the household power outlet at all times.
- When disconnecting the AC power cord, switch off the power first using the power button.
- The life of the memory back-up batteries is reduced if the AC power cord is disconnected from a household AC outlet with the power still supplied.
- While exchanging the memory back-up batteries, be sure to connect the AC power cord both to the unit and to the household AC outlet.

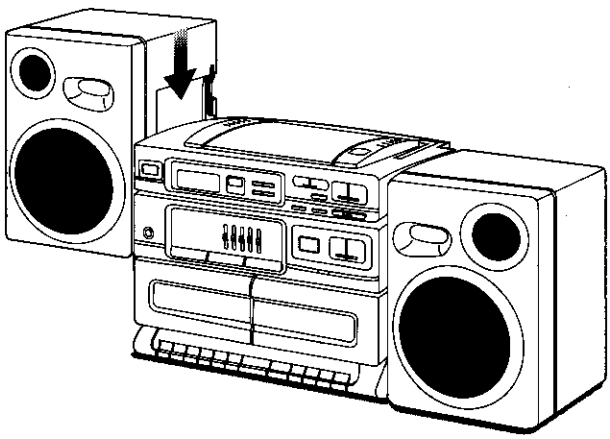
Connecting the Speaker System

Speaker system connection

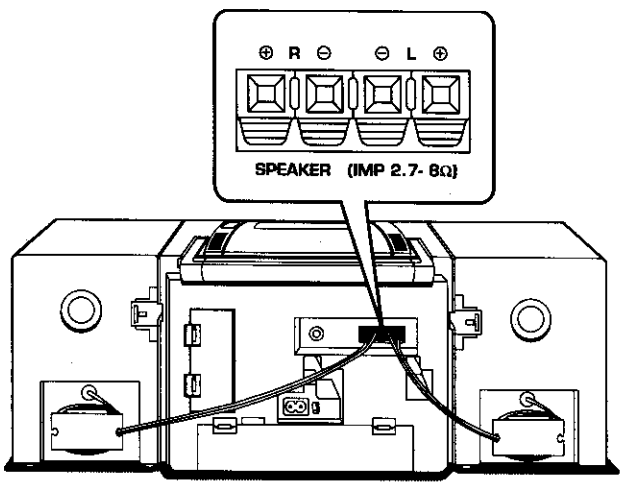
This unit can be used as a one-piece portable stereo radio cassette recorder, or a three-piece component system, by attaching or detaching the speaker system.
Before attaching or detaching the speakers, be sure to disconnect the speaker cables from the speaker terminals.
Be sure to press STDBY ⏻ (AC)/ON to turn the unit off before connecting or disconnecting the speaker cables.

Attaching the speakers

1. Align the speaker with the main unit as shown in the figure, interlock the grooves and press down.



2. Connect the speaker cables (black) to the ⊖ (negative) speaker terminal, and the other speaker cable (red) to the ⊕ (positive) speaker terminal.

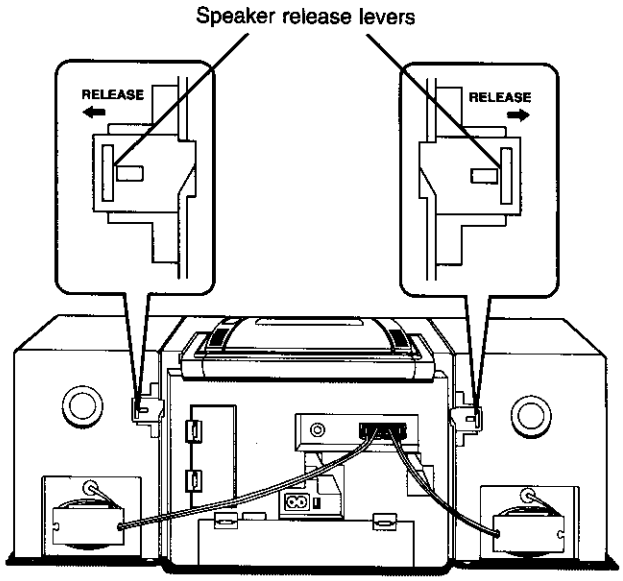


3. When using the unit with the speakers attached, wind the speaker cables as shown.

Note

Since a strong magnet is used for the speaker, keep magnetized commuter passes, tickets or personal credit cards, recorded tapes, watches, etc. away from the speaker. The speaker magnet in the unit may damage them.

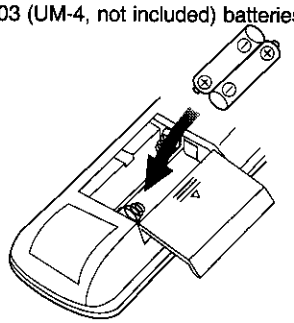
Detaching the speakers



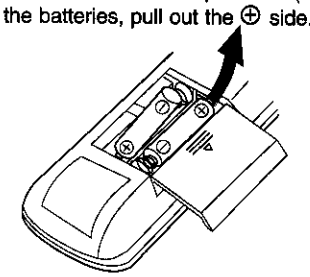
Unlock the speaker release levers by pulling them in the direction shown above, and slide each speaker up.

Battery installation

Insert two R03 (UM-4, not included) batteries as shown below.



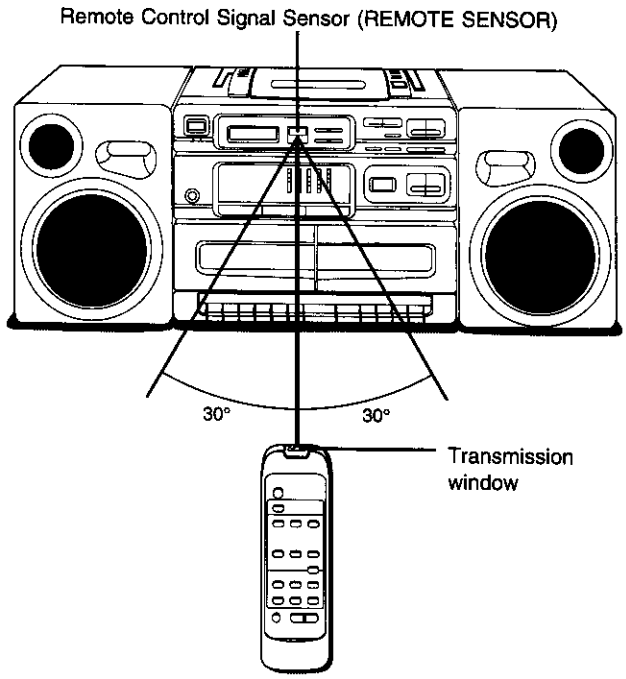
Insert the batteries in the correct polarities (⊕, ⊖).
To remove the batteries, pull out the ⊕ side.



Use of batteries

- Do not mix old and new batteries, or batteries of different types (manganese with alkaline, etc.).
- Always remove old, weak or worn-out batteries promptly and dispose of them properly.
- Never subject batteries to excessive heat or flame; do not attempt to disassemble them; and be sure they are not short-circuited.
- If the unit is not to be used for a long period of time, remove the batteries and store them in a cool, dark place.
- If a battery leaks, remove all batteries and dispose of them properly.
- Thoroughly clean the battery compartment before inserting new batteries.
- If the electrolyte comes into contact with skin or clothes, flush with water immediately.
- Keep batteries out of reach of children.
- Do not use rechargeable (nickel-cadmium) type batteries.
- Do not attempt to recharge alkaline or manganese batteries.

Remote control unit's operation range



Face about 7 meters in front of the sensor.

How to use the remote control unit properly

- Do not place obstacles between the remote control signal sensor and remote control unit.
- Do not expose the remote control signal sensor to direct sunlight or to the bright light of an inverter fluorescent light.
- Take care by keeping the remote control signal sensor and the transmission window free from dust.

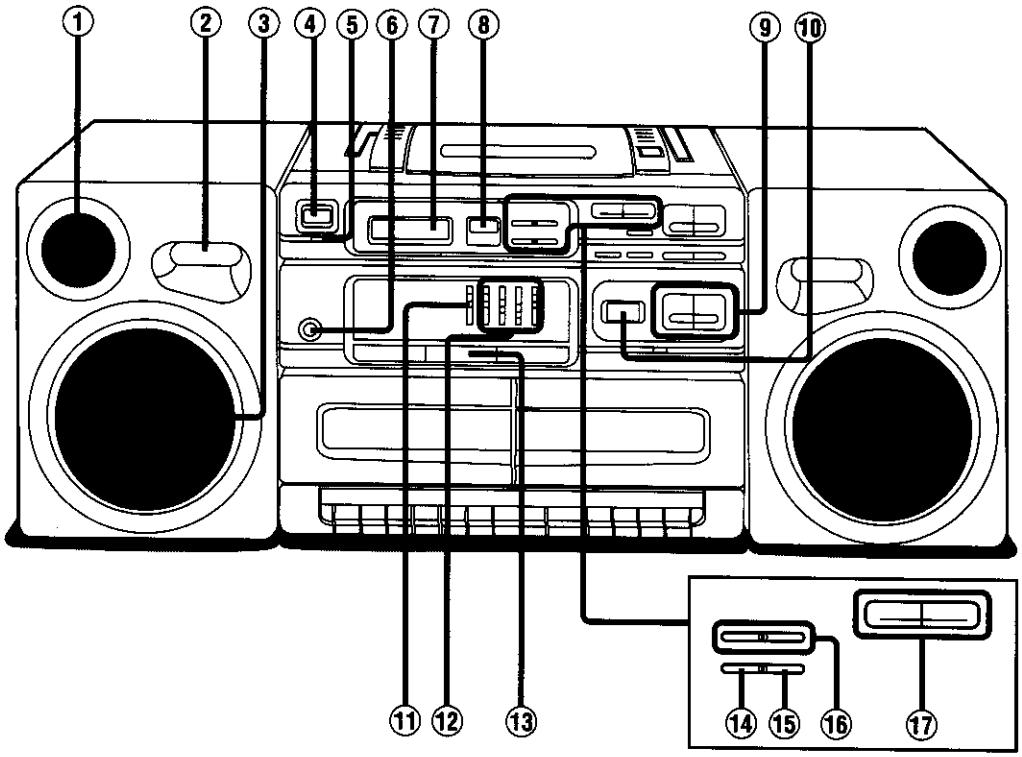
To prevent malfunctioning of the remote control unit:

- Do not disassemble or reconstruct the unit.
- Do not place heavy objects on top of it.
- Do not leave it where it will be exposed to direct sunlight.
- Do not spill beverages or other liquids over it.

Battery life

The batteries life is about one year.
Although the battery life varies depending on how often the device is used, the batteries should be replaced about once every year on the average.
The batteries should be replaced if commands from the remote control transmitter do not operate the unit even when the transmitter is held close to the front panel.

Location of Controls

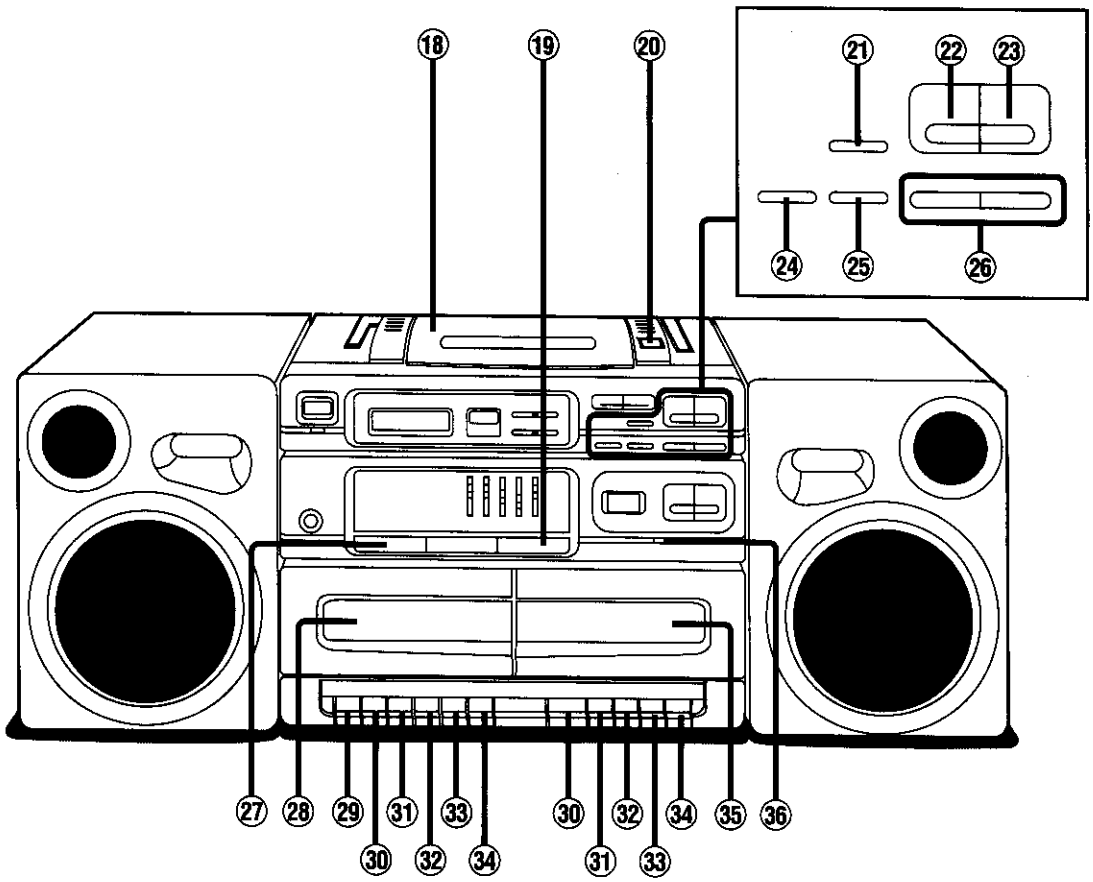


Basic controls

No.	*Name*	*Ref. page*
①	**Speakers (Tweeter)**	
②	**Bass reflex ports**	
③	**Speakers (Woofer)**	
④	**Power "STDBY ⏻ (AC)/ON" switch [STDBY ⏻ (AC)/ON]** Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.	*11*
⑤	**Power/battery, standby indicator (POWER/BATT, STDBY ⏻)** The indicator lights green when the unit is turned on. When the AC power supply is used, it functions as an AC connection indicator. (The indicator colour changes to red when the unit is turned off.) When the unit is operated on batteries, it functions as a battery check indicator. (See page 4.)	
⑥	**Headphones jack (PHONES)**	*11*
⑦	**Display panel**	
⑧	**Remote control signal sensor (REMOTE SENSOR)**	*7*
⑨	**Volume control buttons (– VOLUME +)**	*11*
⑩	**Extra bass system control button (XBS MULTI-POSITION)**	*11*
⑪	**Balance control (BALANCE)**	*11*
⑫	**Graphic equalizer controls (GRAPHIC EQUALIZER)**	*11*

Tuner controls

No.	*Name*	*Ref. page*
⑬	**Tuner button (TUNER/BAND)**	*12*
⑭	**FM mode/ beat proof button (FM MODE/ B.P)**	*14, 20*
⑮	**Tuning memory button (TUNING MEMORY)**	*12*
⑯	**Tuning buttons (– TUNING +)**	*12*
⑰	**Preset tuning button (∨ PRESET TUNING ∧)**	*12, 13*

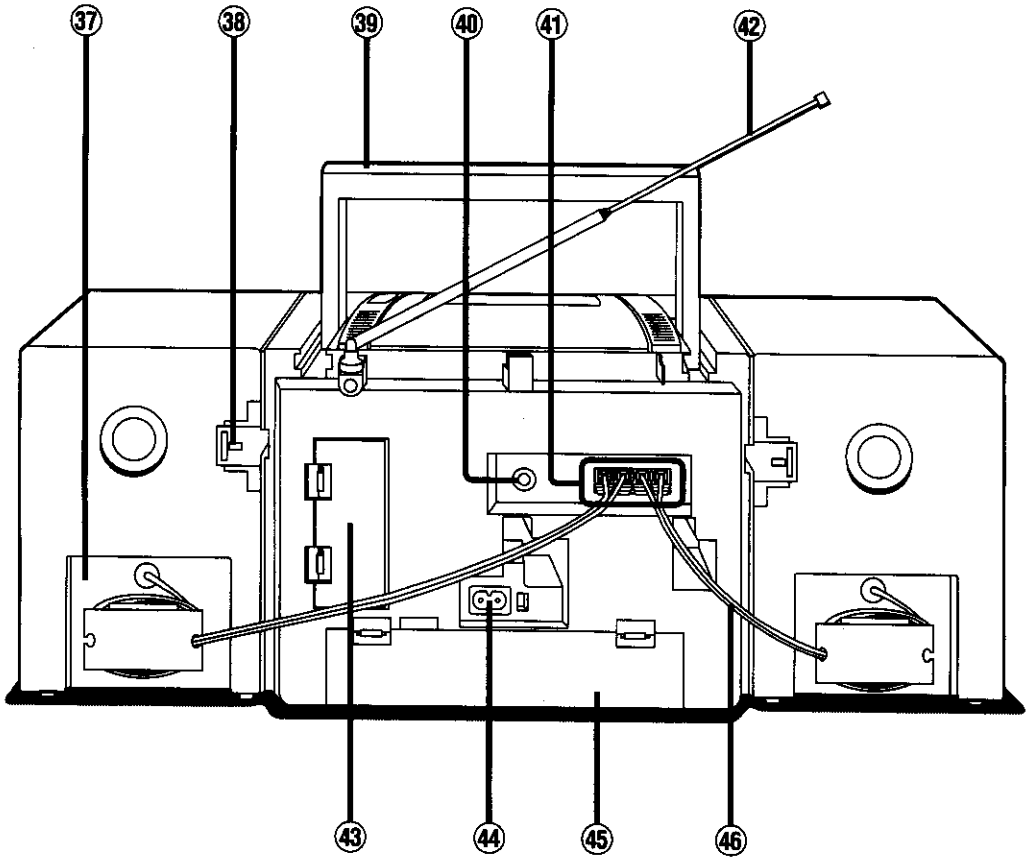


CD controls

No.	*Name*	*Ref. page*
⑱	**CD lid**	*14*
⑲	**CD button (CD)**	*14*
⑳	**CD lid open button (⏏)**	*14*
㉑	**Easy CD recording button (EASY CD REC)**	*19*
㉒	**Stop/clear button (■/CLEAR)**	*14*
㉓	**Play/pause button (►/II)**	*14*
㉔	**Memory button (MEMORY)**	*15*
㉕	**Repeat button (REPEAT)**	*16*
㉖	**Skip/search buttons (I◄◄SKIP/SEARCH►►I)**	*17*

Cassette deck controls

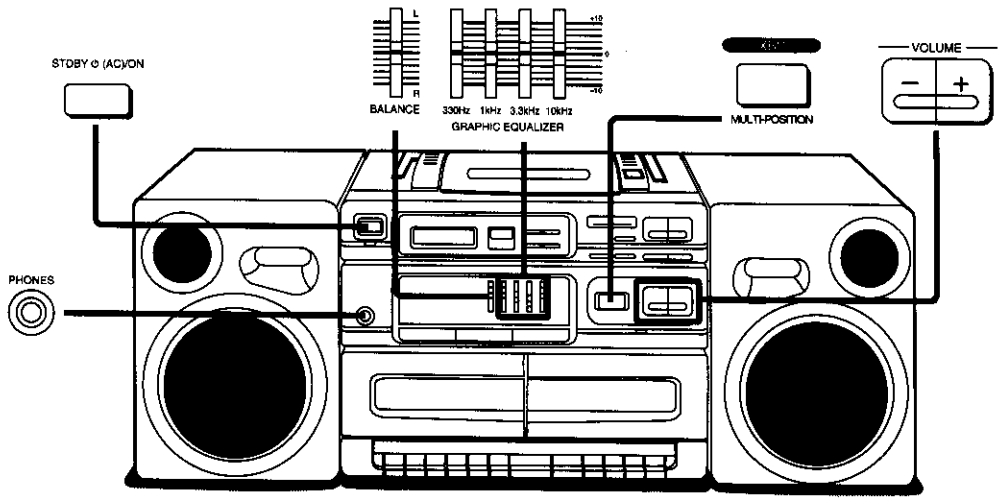
No.	*Name*	*Ref. page*
㉗	**Tape button (TAPE)**	*18*
㉘	**Deck 1 cassette holder (DECK 1)**	*18*
㉙	**Record button (● REC)**	*21*
㉚	**Playback button (► PLAY)**	*18*
㉛	**Rewind/review button (◄◄ REW/REV)**	*18*
㉜	**Fast forward/cue button (►► FF/CUE)**	*18*
㉝	**Stop/eject button (■/⏏ STOP/EJECT)**	*18*
㉞	**Pause button (II PAUSE)**	*18*
㉟	**Deck 2 cassette holder (DECK 2)**	*21*
㊱	**Edit recording selector (EDITING)**	*21*



Rear panel section

No.	*Name*	*Ref. page*
37	Speaker cable compartments	*6*
38	Speaker release levers (RELEASE)	*6*
39	Handle	
40	Mixing microphone jack (MIX MIC)	*22*
41	Speaker terminals	*6*
42	Telescopic antenna	*14*

No.	*Name*	*Ref. page*
43	Memory back-up battery compartment cover	*5*
44	AC socket (AC IN~)	*4*
45	Battery compartment cover	*4*
46	Speaker cables	*6*

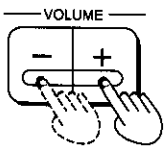


Turning the unit ON/OFF

To turn the unit ON:
Press STDBY ⏻ (AC)/ON.

To turn the unit OFF:
Press STDBY ⏻ (AC)/ON.
When using an AC power, the unit is turned to standby mode. (STDBY ⏻ indicator lights red.)

Adjusting the volume



Press VOLUME buttons to adjust the volume to the desired level.
+ : Press this to increase the volume.
– : Press this to decrease the volume.

Adjusting the extra bass (XBS)

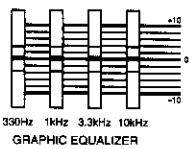
Press XBS to select the extra bass to the desired level.
The display changes each time the button is pressed.

→XBS 0→XBS 1→XBS 2→XBS 3

Reference

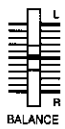
When you adjust the volume level at –5 dB or higher, the XBS level cannot be set at XBS 3.

Adjusting the graphic equalizer controls



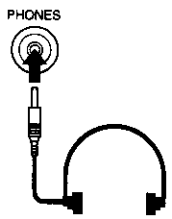
Adjust the graphic equalizer controls to the desired settings.

Adjusting the balance control



Adjust the balance of sound heard from the left and right.

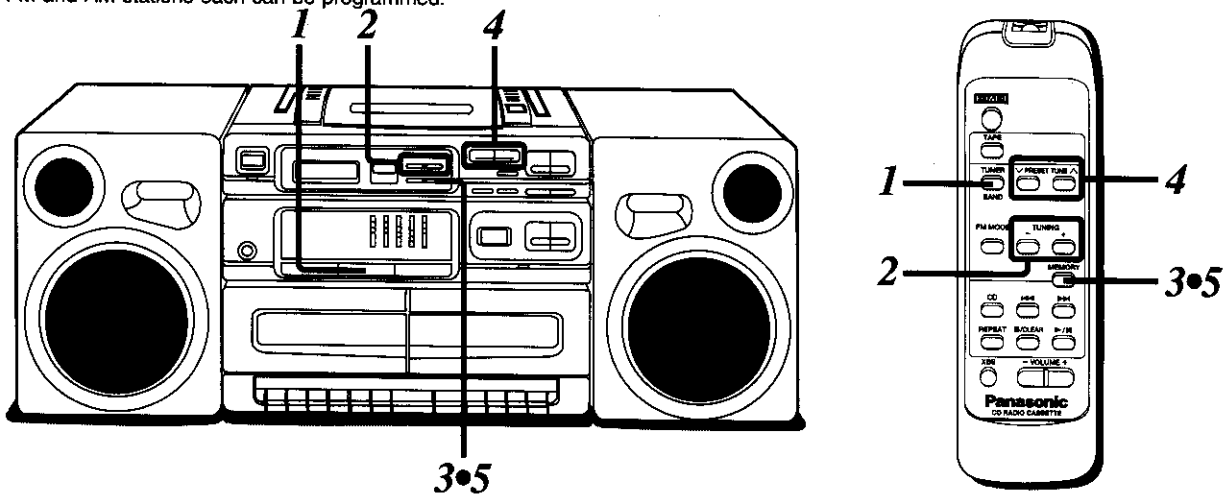
Listening through headphones (not included)



Reduce the volume and connect the headphones to the PHONES jack.
Plug type: Stereo mini
Avoid listening for prolonged periods of time to prevent hearing damage.

Programming Broadcast Stations

Once broadcast stations have been programmed, they can easily be tuned in at the touch of a button on the unit or on the remote control.
Up to ten FM and AM stations each can be programmed.



Example: Programming FM 88.1 MHz in preset channel 2.

1 TUNER/BAND

Press TUNER/BAND to display "FM" or "AM".

AM → FM

(The display changes each time the button is pressed.)

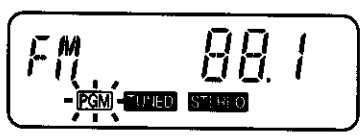
2 – TUNING +

Press – TUNING + to tune in the broadcast station.

FM stations can be selected automatically (see the right).

3 TUNING MEMORY

Press TUNING MEMORY.



4

Press ∨ PRESET TUNING ∧ to display the preset channel in which the station is to be programmed.

5 TUNING MEMORY

When PGM is flashing, press TUNING MEMORY.

6

Repeat steps 2 to 5 to program the other stations.

Selecting FM stations automatically:

Keep pressing – TUNING + until the frequency display starts to change. A station with good reception is automatically selected and the selection process then stops.

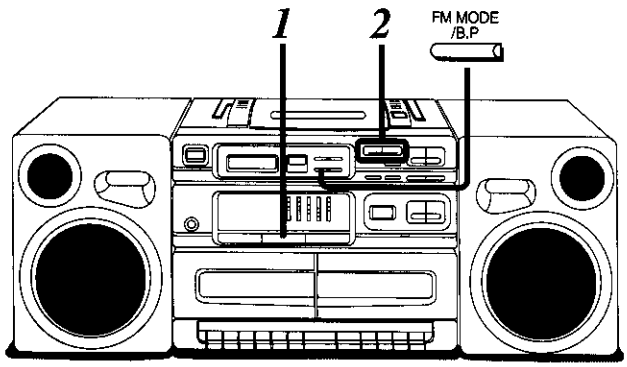
To stop the selection at any time:
Press – TUNING + again.
The selection may stop without tuning into any station if there is interference in the vicinity. In such case, tap – TUNING + until a station's frequency is picked up.

Programming AM stations:

1. Press TUNER/BAND in steps 1 to display AM.
2. Perform steps 2 to 5.

Preset tuning

Make sure you have completed the procedure for "Programming Broadcast Stations". (See page 12 beforehand.)
To listen to a station without programming it first, refer to "Listening to broadcast stations which have not been programmed". (See right.)



Using the main unit

1 TUNER/BAND

Press TUNER/BAND to display "FM" or "AM".

AM → FM

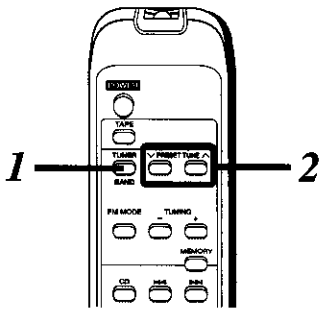
(The display changes each time the button is pressed.)

2

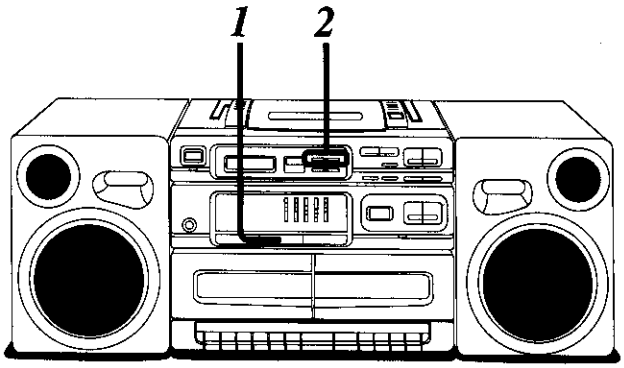
Press PRESET TUNING to select the preset channel.

The station is changed each time the button is pressed.

Using the remote control



Listening to broadcast stations which have not been programmed (Manual tuning)



1 TUNER/BAND

Press TUNER/BAND to display "FM" or "AM".

AM → FM

(The display changes each time the button is pressed.)

2 – TUNING +

– TUNING +

Press – TUNING + to tune in the broadcast station.

+ : Press this to increase the broadcast frequency.
– : Press this to decrease the broadcast frequency.

FM stations can be selected automatically (see below).

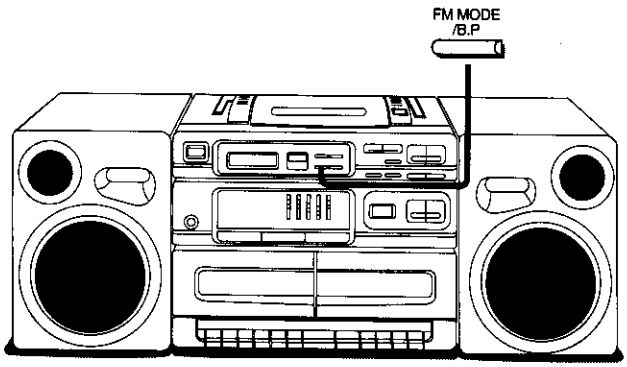
Lights when an FM stereo program is picked up.

Lights when a station is tuned in properly

Selecting FM stations automatically:

Keep the button depressed until the frequency display starts to change. A station with good reception is automatically selected and the selection process then stops.

Frequency display steps:
The frequency display changes in the following steps:
FM: 100 kHz steps
AM: 9 kHz steps



For better reception

When there is too much interference during an FM stereo broadcast

Reduce the interference by setting the sound to monaural.

Press FM MODE/B.P.

Lights.

To return to stereo reception, repeat the same procedure and turn off the MONO display.

Note

The STEREO display will not light in the monaural mode even when a stereo broadcast is received.

Adjusting the antenna for better reception

FM

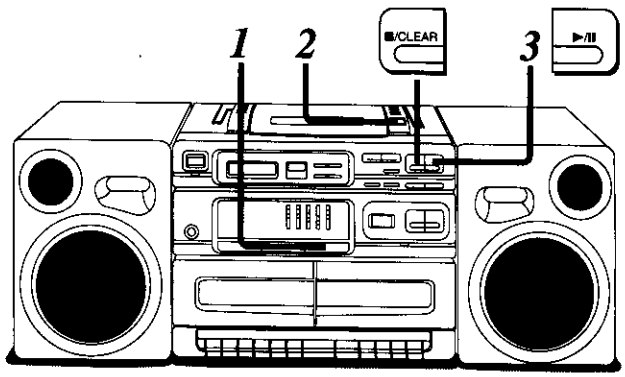
Pull out the telescopic antenna and adjust its length and angle for optimum reception.

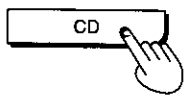
AM

Turn the unit in the direction which gives the best results.

Reference

Radio broadcasts may be hard to receive in a moving vehicle or building because their signals are weak. Whenever possible, use the unit by a window.

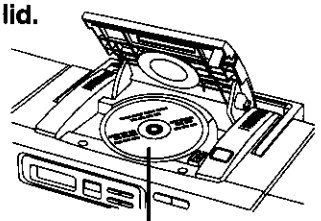


1 

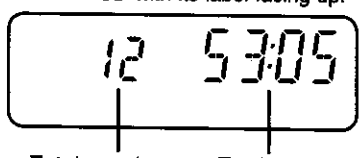
Press CD.
"NO DISC" appears on the display.

2

Press ≜ to open the CD lid, insert the CD and then close the lid.



Insert a CD with its label facing up.

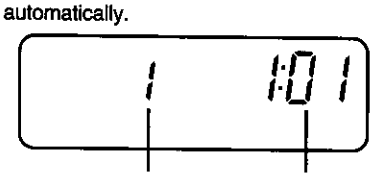


Total number of tracks

Total play time

3

Press ►/II to start play.
Play now starts in sequence from track 1 to the last track, after which it will stop automatically.



The track number currently playing

Elapsed play time of track now playing

To stop play:

Press ■/CLEAR.

To stop play temporarily:

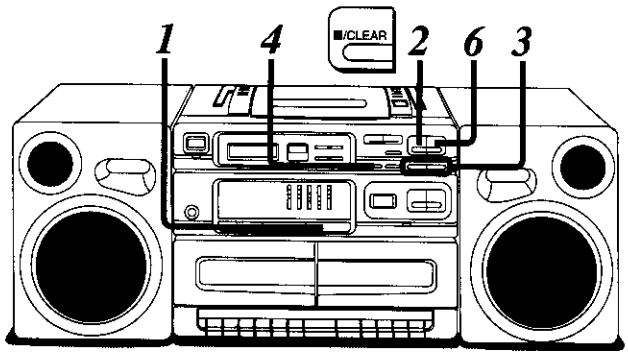
Press ►/II .
To resume play, press ►/II again.

Note

Interference may affect radio or TV reception when CDs are played close to a radio or TV set. If this occurs, place the unit as far away from the set as possible.

Selecting and listening to your favourite tracks (Program play)

Up to 16 tracks can be programmed.



Using the main unit

Example: Selecting tracks 2, 5 and then 7.

1 CD

Press CD to select the CD mode.

2 ■/CLEAR

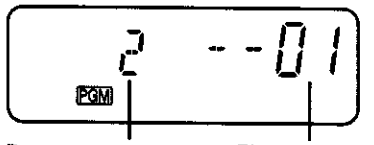
Press ■/CLEAR.

3 ⏮SKIP/SEARCH⏭

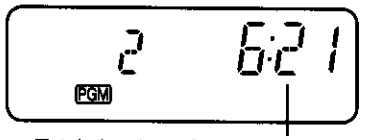
Press ⏮SKIP/SEARCH⏭ to select the desired tracks.

4 MEMORY

Press MEMORY.



Programmed track Play sequence



Total play time of programmed track

5 **Repeat steps 2 and 3 to program other tracks as well.**

6 ►/II

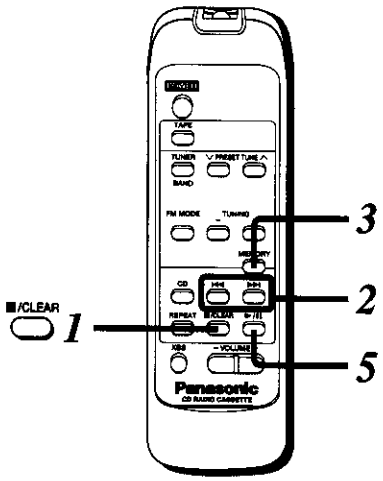
Press ►/II.

The programmed tracks are played in the programmed sequence, and play stops automatically.

To release program play:

■/CLEAR

In the stop mode, press ■/CLEAR.



Using the remote control

Example: Selecting tracks 2, 5 and then 7.

1 ■/CLEAR

Press ■/CLEAR.

2 ⏮ ⏭

Press ⏭ or ⏮ to select the desired tracks.

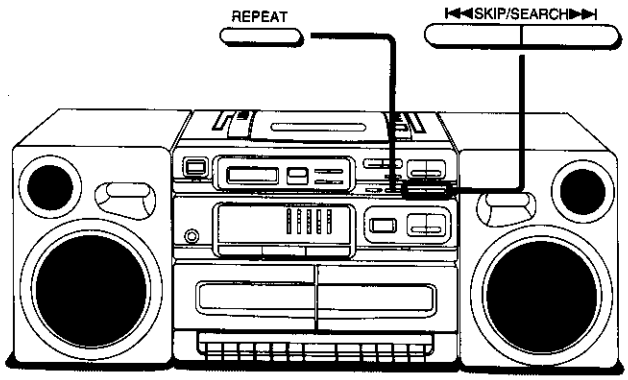
3 MEMORY

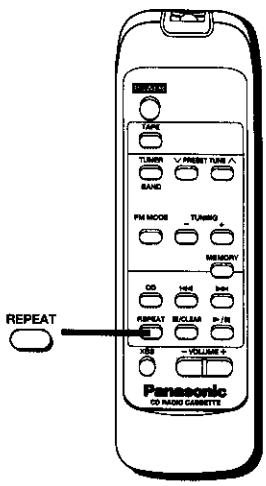
Press MEMORY.

4 **Repeat steps 2 and 3 to program other tracks as well.**

5 ►/II

Press ►/II to start play.



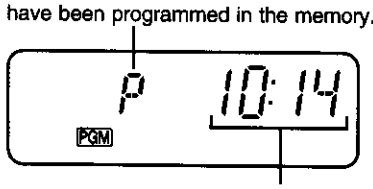


When "FULL" appears on the display:
The number of programmed tracks has exceeded 16. No more tracks can be programmed.

When "–:–" appears on the display:
The total time of the programmed tracks has exceeded 120 minutes. However, programming and play are still possible.

Memory retention of programmed tracks:
The contents of the memory will be retained even if play is stopped or if the power is turned off before its completion.

This appears when tracks have been programmed in the memory.



Total play time of programmed track

To check what has been programmed:
Press ⏮ or ⏭ while the above display appears.
Each time this button is pressed, the number of the track and the play sequence can be checked.

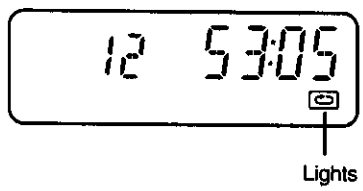
The programmed is erased in the following circumstances:
- When ⏏ has been pressed.
- When the AC power cord is disconnected or the batteries are removed without inserting memory back-up batteries beforehand.

References

If you leave the unit in the stop mode for about four minutes, it will automatically turn itself off.

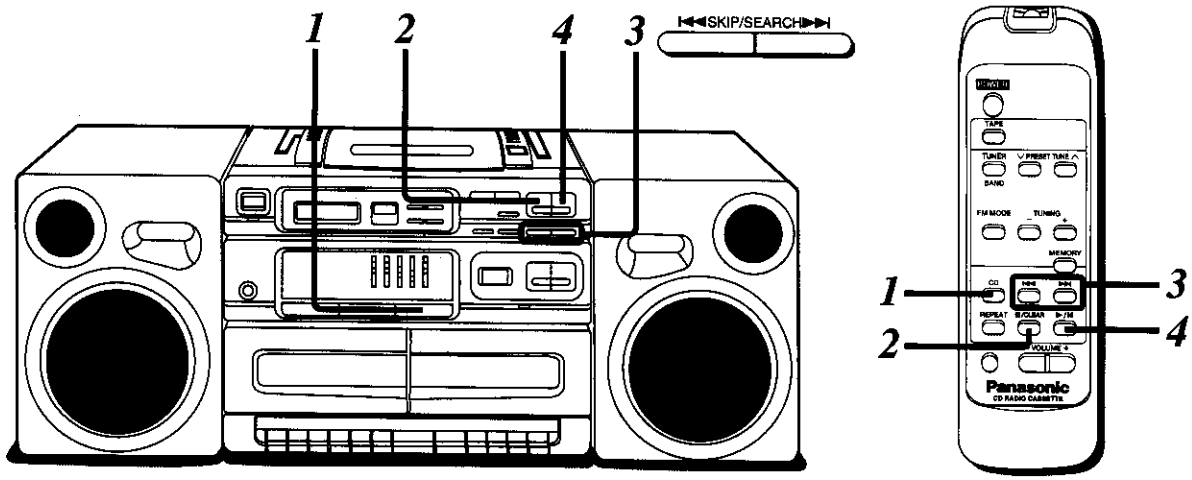
To repeat tracks (Repeat)

Before play or during play:
Press REPEAT.



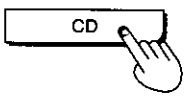
To cancel repeat play:
Press REPEAT again to turn ⟲ indicator off.

For your reference:
- In program play (see page 15), the unit plays the programmed tracks in the programmed sequence repeatedly.
- You can enjoy the same track over and over by programming only one track.



Starting CD play from a desired track (Direct play)

Example: Starting disc play from track 9.

1 

Press CD to select the CD mode.

2

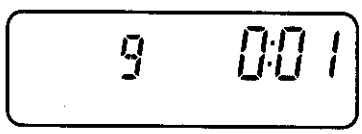
Press ■/CLEAR.

3

Press ⏮SKIP/SEARCH⏭ to display track number (9).

4

Press ►/II to start play.



All the tracks starting from the track selected and ending with the last track are played in sequence, and play automatically stops.

To skip tracks

Press ⏭ to skip ahead to the start of the next track.

Press ⏮ to skip back to the start of the current track.
By repeating this operation, you can skip tracks in the number of times you pressed the button.

For your reference:
In program play (see page 15), you can skip forward and backward in the programmed sequence.

Rapid forwarding and reversing (Search)

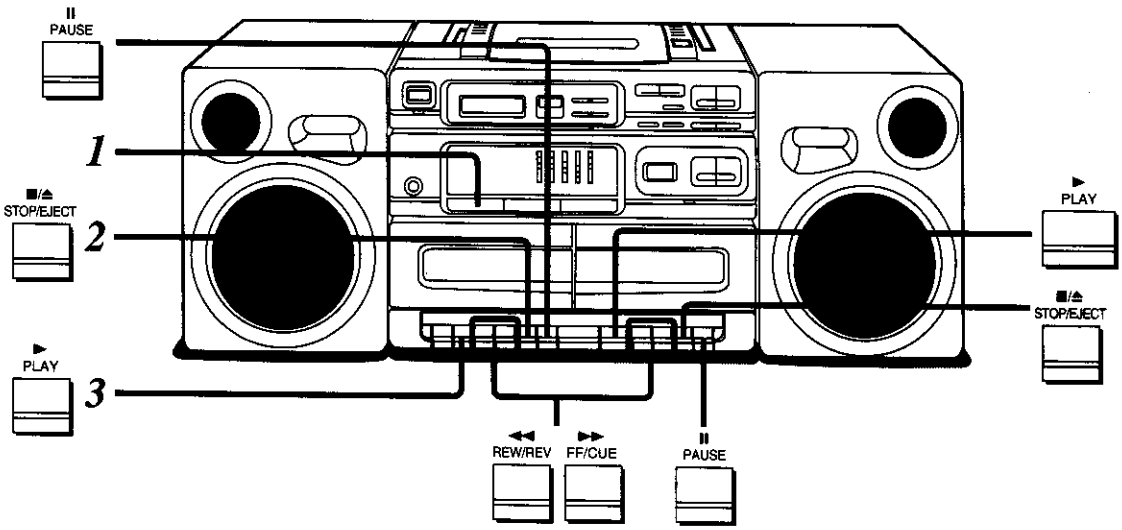
During play:
Keep pressing ⏭ to advance the disc play rapidly.

Keep pressing ⏮ to review disc play rapidly.
Release the button when the desired position on the disc is reached.

For your reference:
During program play (see page 15) search will only take place within the track in play.

Listening to Tapes

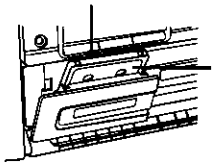
You can use either deck 1 or deck 2 for tape playback by following the same steps.



1 TAPE **Press TAPE.**

2 ■/⏏ STOP/EJECT **Press STOP/EJECT, insert the tape and close the cassette holder.**

Reverse side



With the side to be played facing you

3 ▶ PLAY **Press PLAY to start play.**

To stop play:

■/⏏ STOP/EJECT **Press STOP/EJECT.**

To stop play temporarily:

II PAUSE **Press PAUSE.**

To resume play:
Press PAUSE again.

References

If you leave the unit in the stop mode for about four minutes, it will automatically turn itself off.

Type of tape which can be played on this unit:

Normal/TYPE I	○
CrO_2/TYPE II	×
Metal/TYPE IV	×

To rewind or fast forward the tape

◀◀ REW/REV ▶▶ FF/CUE **In the stop mode, press REW/REV or FF/CUE.**

Note

Do not press PLAY during rewinding or fast forwarding, as this may jam the tape. Be sure to press STOP/EJECT before proceeding to the next operation.

To search a particular spot on a tape

◀◀ REW/REV ▶▶ FF/CUE **During playback, press REW/REV or FF/CUE.**

Tape play is resumed when the button is released.

Automatic playback relay (Deck 2 to Deck 1)

When Deck 2 playback has finished. Deck 1 playback starts automatically.

1 Insert the playback tapes into Deck 1 and Deck 2.
2 Press Deck 2 PLAY.
3 Press Deck 1 PAUSE, then press PLAY.

Full auto-stop

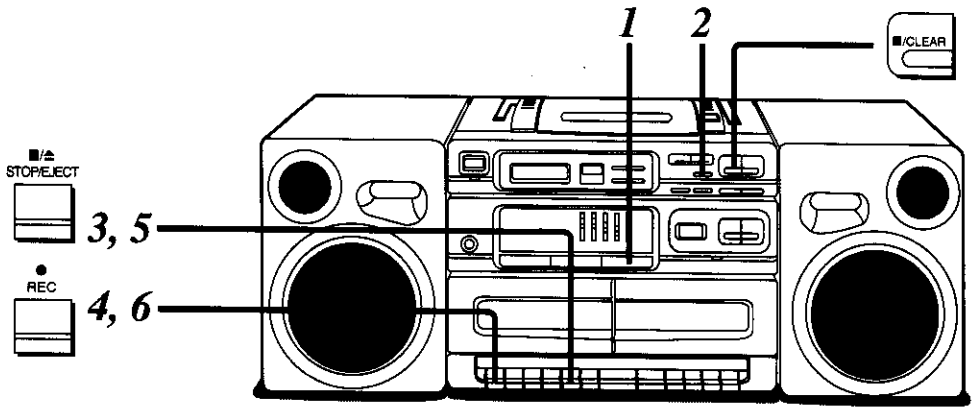
During playback, recording, fast forward or rewind when the tape reaches its end, the automatic stop system will release the operation buttons.

Recording Compact Discs

Only normal tapes can be used with this unit.

Easy CD recording

All the tracks are recorded in their original sequence onto a single tape.
If your recording of the last track on the top side is incomplete, this track will be re-recorded at the beginning of the reverse side.

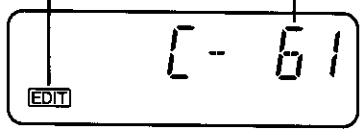


Preparation: Insert the CD.

1 CD **Press CD.**

2 EASY CD REC **Press EASY CD REC to display the length of tape required.**

Lights — Length of tape required to record all tracks

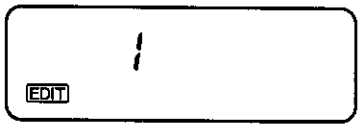


3 ■/⏏ STOP/EJECT **Press Deck 1 STOP/EJECT and insert the tape which is longer than the length displayed in step 2.**

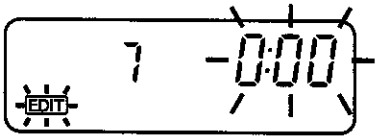
- Insert the tape with the side to be recorded facing you.
- Rewind the tape completely before recording.

4 ● REC **Press ● REC.**

The CD is set to the pause mode at the start of the first track.
After a 10-second blank is recorded on the leader tape, recording starts automatically.



The tape stops when the end of top side is reached. The CD is set to the pause mode.



5 ■/⏏ STOP/EJECT **Press STOP/EJECT and turn the tape over.**

6 ● REC **Press ● REC.**

After a 10-second blank is recorded on the tape, the track which was partially recorded on the end of the tape is recorded from its beginning.

To stop recording:

■/CLEAR ■/⏏ STOP/EJECT **Press ■/CLEAR and STOP/EJECT.**

Recording your favourite tracks:

After programming your favourite tracks (see page 15), perform steps 2 to 6 above.

Type of tape which can be used for recording:

Normal/TYPE I	○
CrO_2/TYPE II	×
Metal/TYPE IV	×

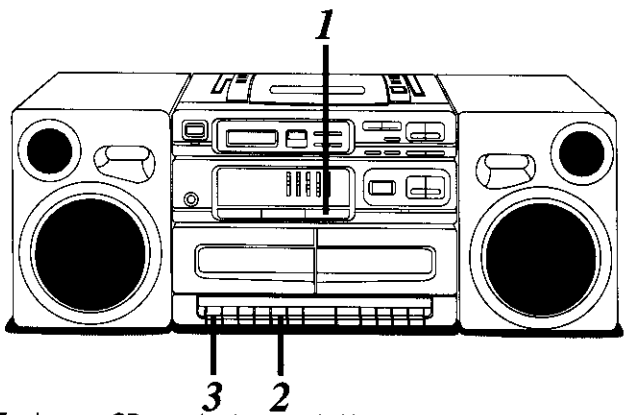
Note

If the unit is brought near a TV set during recording, noise may be recorded due to the effects of the signals from the TV set. Maintain a distance of a least 1.5 meters between the unit and a TV set.

For your reference:

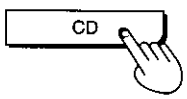
- Any change made to the volume or tone quality during recording will not affect the recording.
- In order to prevent trouble caused by flat batteries, it is recommended that you either supply power to the unit from the household AC outlet or replace all the batteries with new ones when you are recording something which is important to you.

Recording using an alternative method (not easy CD recording)



Tracks on a CD can also be recorded in the following ways.
- CD tracks can be recorded onto the remainder of a recorded tape.
- Tracks can be recorded from the start of the tape's reverse side.
- Tracks with a long play time can be recorded in their original sequence.

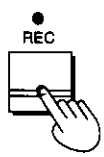
Preparation: Insert the CD.

1 

Press CD.

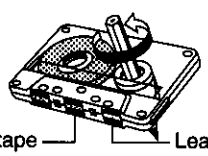
2

Press Deck 1 STOP/EJECT and insert the tape.
- Insert the tape with the side to be recorded facing you.
- Either have the leader tape wound up in advance or locate the position where recording is to begin. (See below).

3 

Press REC to start recording on the tape.
CD play starts simultaneously.

To take up the leader tape:



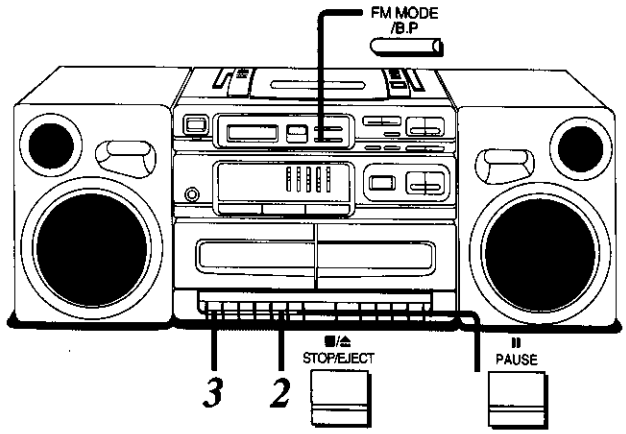
Magnetic part of tape (Recording can be made.) — Leader tape (Recording cannot be made.)

To erase sound previously recorded on a tape:

Recording new sound onto a pre-recorded tape automatically erases what was previously recorded.

To erase all the sound on a tape:
1. Insert the tape with the side whose recording is to be erased facing you.
2. Press TAPE.
3. Press REC.

Only normal tapes can be used with this unit.

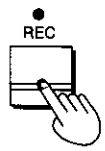


Preparation: Take up the leader tape before proceeding.

1 **Tune in the broadcast station.**
(See page 13.)

2

Press Deck 1 STOP/EJECT and insert the tape.
Insert the tape with the side to be recorded facing you.

3 

Press ● REC.

To stop the recording:

Press STOP/EJECT.

To stop the recording temporarily:
Press PAUSE.
To resume recording, press PAUSE again.

When too much noise is heard while recording an AM broadcast:

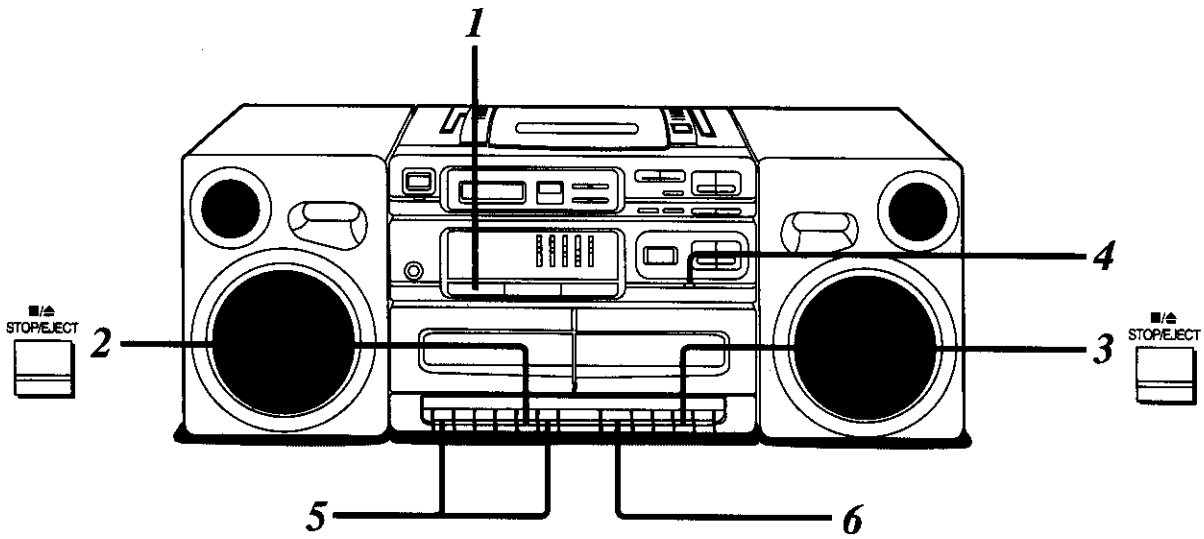
Set FM MODE/B.P to whichever position yields less noise.
The display changes each time the button is pressed.

BP1 → BP2

For your reference:
- Any change made to the volume or tone quality during recording will not affect the recording.
- In order to prevent trouble caused by flat batteries, it is recommended that you either supply power to the unit from the household AC outlet or replace all the batteries with new ones when you are recording something which is important to you.

Recording Tape to Tape

When the Deck 1 pause and record buttons are pressed, tape editing starts by pressing the Deck 2 playback button.
Only normal tape can be used with this unit.



Take up the leader tape before proceeding. (Refer to page 20).

1 TAPE **Press TAPE.**

2 ■/⏏ STOP/EJECT **Press Deck 1 STOP/EJECT and insert the tape to be recorded.**
Insert the tape with the side to be recorded facing you.

3 ■/⏏ STOP/EJECT **Press Deck 2 STOP/EJECT and insert the tape to be played back.**
Insert the tape with the side to be played facing you.

4 NORMAL — HIGH EDITING **Select the editing speed by setting EDITING.**
HIGH : High speed
NORMAL : Normal speed

5 ⏸ PAUSE ● REC **Press Deck 1 PAUSE, then press REC.**

6 ▶ PLAY **Press the Deck 2 PLAY.**

Editing is started by means of the synchro-start function.
Do not set the "CD" or "RADIO" function selector during editing.
Do not change the editing selector during editing. The playback sound may flutter.
Some TV sets generate noise that could be recorded during editing. To prevent the possibility of this, do not use this unit closer than 1.5 m to a TV set.

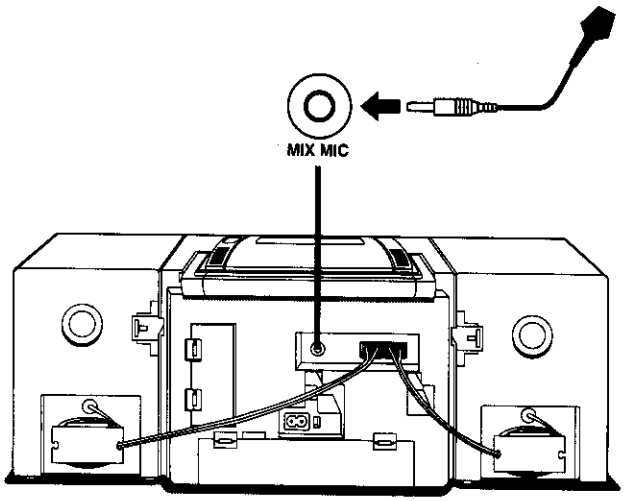
To stop the editing:

■/⏏ STOP/EJECT **Press the Deck 1 and Deck 2 STOP/EJECT.**

For your reference:
Recording is not affected by changes made to the volume or tone quality during the recording.
The recording level and the noise reduction effect of the original (playback) tape will be recorded on the new tape.

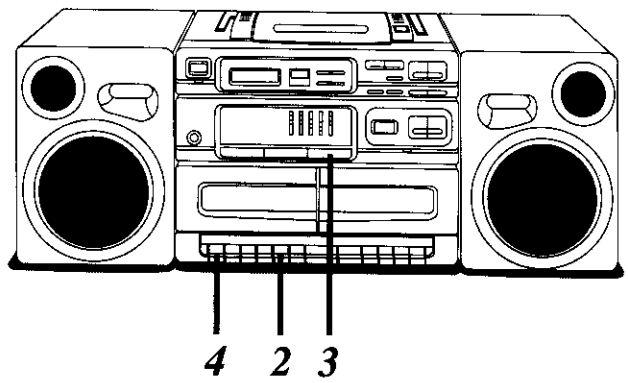
Enjoying the Microphone Mixing

Mixing is the combination of a voice or instrumental sound (through a microphone connected to the mixing microphone jack) and the sound from a CD, tape or radio.



Mixing playback

1. Connect the microphone to MIX MIC after reducing the volume level.
2. Set the desired source to the playback mode.
3. Start microphone mixing and adjust the volume level.



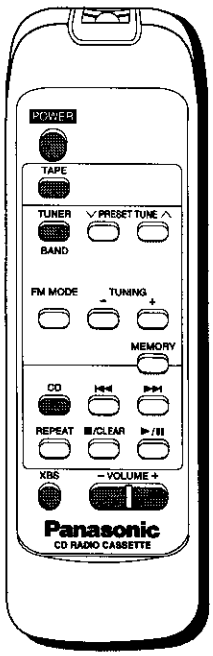
Mixing recording with CD or radio broadcast

1. Connect the microphone to MIX MIC after reducing the volume level.
2. Insert a tape for recording in cassette Deck 1.
3. Set the desired source.
4. Press ● REC.

Notes

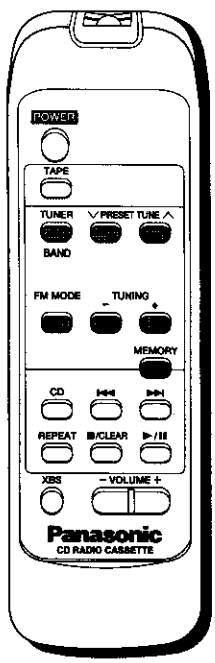
- When not using a microphone, disconnect it from the microphone jack.
- While using the microphone, howling or squealing may sometime occur. When it occurs, separate the microphone from the speaker, or turn down the volume level.
- When microphone mixing, if the CD or cassette tape is stopped or CD is paused, the voiced sounds from the speaker also stop.

Quick Reference of Remote Control Operations



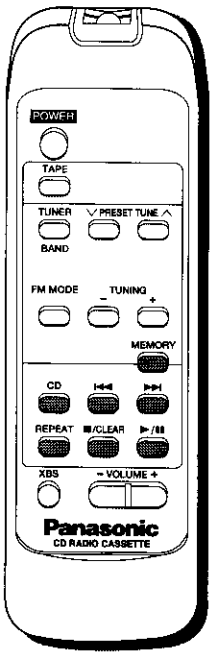
Common operations

Turning the power ON/OFF (when a household power outlet is used)	POWER
Adjusting the volume	– VOLUME +
Adjusting the XBS level	XBS
Selecting the input sound source	TUNER (BAND) TAPE CD



Tuner operations

Listening to a programmed radio station (See page 13.)	TUNER (BAND) ➡ PRESET TUNE ∨ ∧
Listening to a radio station which has not been programmed	TUNER (BAND) ➡ TUNING – +
Programming Broadcast station (See page 12.)	TUNER (BAND) ➡ TUNING – + ➡ MEMORY ➡ PRESET TUNE ∨ ∧ ➡ MEMORY
To reduce the interference during FM Stereo broadcast. (See page 14.)	FM MODE



CD operations

Starting play (See page 15.)	CD ➡ ►/II
Temporarily stopping play	►/II
Stopping play To clear program play (See page 15.)	■/CLEAR
To skip tracks (See page 17.)	⏮ ⏭
To search forward or backwards (See page 17.)	⏮ ⏭
Listening to favourite tracks (See page 15.)	■/CLEAR ➡ ⏮ ⏭ ➡ MEMORY ➡ ►/II
Listening to a track repeatedly (See page 16.)	REPEAT
Listening from a particular track (See page 17.)	CD ➡ ⏮ ⏭ ➡ ►/II

Troubleshooting Guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.
If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, or consult your dealer for instructions.

Problem	Probable cause(s)	Suggested Remedy
Common problems		
No operation when unit is powered by batteries.	Is the AC power cord still connected to the unit while batteries are being used?	Disconnect the AC power cord.
	Are the batteries flat?	Replace them with new ones. Alternatively, use a household AC outlet as the power source.
	Have the batteries been installed incorrectly with their (+) and (–) polarities reversed?	Align the (+) and (–) polarities correctly.
"U01" appears.	The batteries are flat.	Replace them with new ones. Alternatively, use a household AC outlet as the power source.
"U02" appears.	Preparations have not been made to supply power to the unit	Install the batteries or connect the AC mains lead.
While listening to CDs		
Play does not start. No display of track numbers, etc.	Has the CD been installed upside down?	Install the CD with the label side facing up.
	Has condensation formed on the unit's CD section?	Turn the unit on and leave it on for about an hour before further operation.
Certain sections are not played properly.	Is the CD dirty?	Wipe it with a soft cloth.
	Is the CD scratched?	Replace it with a new CD.
While listening to tapes		
No recording.	Have the erase-prevention tabs been removed?	Cover the holes with adhesive tape.
High level of noise; poor sound quality.	Are the heads dirty?	Clean them.
	Have the heads been magnetized?	Demagnetize them using a demagnetizer available from an audio store.
While listening to the radio		
High level of noise; stations cannot be tuned in well.	Has the antenna been adjusted properly?	Try changing its direction.
Noise heard during AM reception.	Are you operating the unit and a TV set at the same time?	Place the unit at a distance from the TV. Alternatively, turn off the TV's power.
	Are you using a remote controller for other appliances near the unit?	Use the remote controller at a distance.
While using the remote control		
No operation.	Are the batteries flat?	Replace them with new ones.
	Have the batteries been installed incorrectly with their (+) and (–) polarities reversed?	Align the (+) and (–) polarities correctly.
	Is the remote control's transmitter pointed at the unit's sensor?	Check whether anything is obstructing the path between the two and point the remote control squarely at the unit's sensor and operate.
	Is the unit's sensor exposed to direct sunlight or strong fluorescent light?	Shield the sensor from strong sources of light.

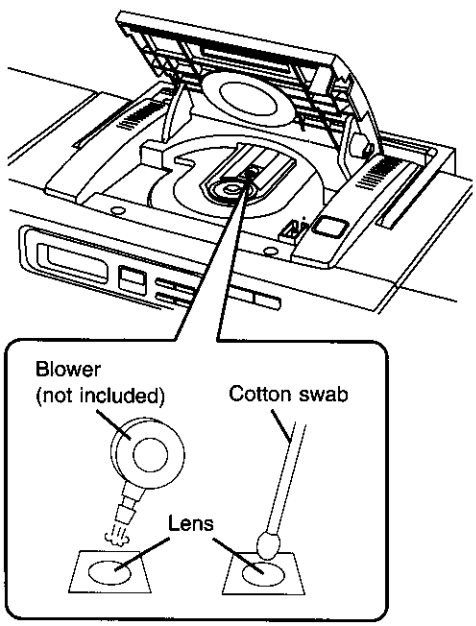
Maintenance of external surfaces

To clean this unit, use a soft, dry cloth.
If the surfaces are extremely dirty, use a soft cloth dipped in a soap-and-water solution or a weak detergent solution.

Wring the cloth well before wiping the unit.
Wipe once again with a soft, dry cloth.
Never use alcohol, paint thinner, benzine, or chemically treated cloths to clean this unit. Such chemicals may damage the finish of your unit.

Lens care

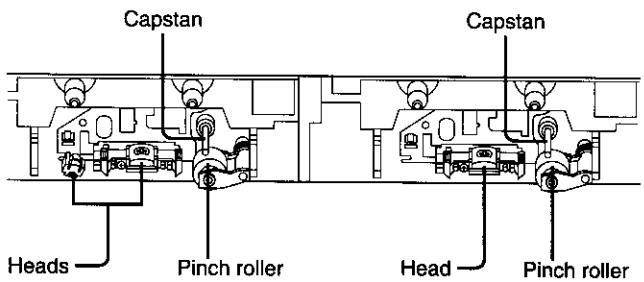
Open the disc lid and clean the lens with a blower (not included). If the lens is extremely dirty, clean it with a cotton swab.



Tape head care

To assure sound quality for recording and playback, be sure to clean the tape heads after approximately every 10 hours of use.

1. Press STDBY ⏻ (AC)/ON to turn the unit off.
2. Press STOP/EJECT to open the cassette holder.
3. Clean the tape heads, pinch rollers and the capstan shafts with a cotton swab (or a soft, lint-free cloth) slightly moistened with isopropyl alcohol.
   Do not use any solution other than alcohol for head cleaning.



Tape head demagnetization

In order to maintain good sound quality, it is recommended that the head assembly be demagnetized when distortion or poor sound quality persists after cleaning the head. If the head assembly becomes magnetized, it could create loss of high frequency response.

Several types of head demagnetizers are available and may be purchased separately at local electronics supply stores. Follow the instructions that are supplied with the device.

Do not bring any type of metal objects or tools such as magnetic screwdrivers in contact with the head assembly.

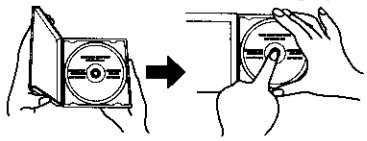
Concerning Compact Discs

Only compact discs having this mark can be used with this unit.

COMPACT disc DIGITAL AUDIO

To remove a disc from its case

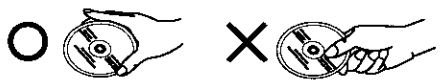
Press the center holder and lift the disc holding by the edges.



To hold the disc

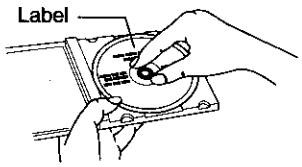
Hold the disc by the edges so the surface is not soiled with fingerprints.
Fingerprints, dirt and scratches can cause skipping and distortion.

(Correct) (Incorrect)



To store a disc in its case

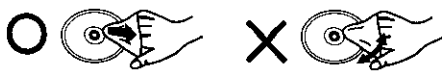
Insert the disc with label facing upwards and press downward at the center.



If the surface is soiled

Wipe gently with a soft, damp (water only) cloth.

(Correct) (Incorrect)



If the disc is brought from a cold to a warm environment, moisture may form on the disc

Wipe this moisture off with a soft, dry, lint-free cloth before using the disc.

Improper disc storage:

You can damage discs if you store them in the following places;
- Areas exposed to direct sunlight.
- Humid or dusty areas.
- Areas directly exposed to a heat outlet or heating appliance.

Handling precautions:

- Do not write on the label side with a ball-point pen or other writing utensils.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not soil with fingerprints.

Concerning Cassette Tapes

Selection of cassette tapes

Only normal tapes can be used with this unit.

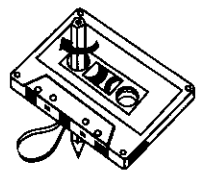
Cassette tape exceeding 90 minutes:
These tapes are handy for their long playback and recording time but be careful about repeatedly stopping and starting, rewinding and fast forwarding these tapes in short intervals as they are thin, tend to stretch and may become entangled in the deck mechanism.

Endless tapes:

Failure to operate these tapes correctly may cause the tape to wind around the revolving parts.

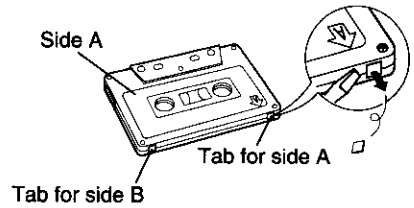
If the tape loosens, take up the slack

Tape slack may cause the tape to break.

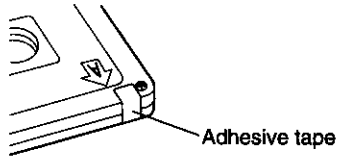


To prevent erasure of recorded sounds

Remove the erase-prevention tabs with a screwdriver or a similar object.



To re-record on a protected cassette, cover the slot with adhesive tape.



Improper tape storage:

You can damage tapes if you store them in the following places;
- In high temperature [35°C (95°F) or higher] or high humidity (80% or higher) areas.
- In a strong magnetic field (near a speaker, on top of a TV, etc.) This can erase a recording.
- Areas exposed to direct sunlight.

Technical Specifications

Radio

Frequency range	
AM	522–1611 kHz (9 kHz steps)
FM	87.5–108.0 MHz (100 kHz steps)

CD player

Sampling frequency	44.1 kHz
Decoding	16 bit linear
Beam source	Semiconductor laser (wavelength 780 nm)
No. of channels	2 channel, stereo
Frequency response	20 Hz–20 kHz (0, –2 dB)
Wow and Flutter	Less than possible measurement data
D/A converter	MASH (1 bit DAC)

Tape recorder

Track system	4 track, 2 channel, stereo
Recording system	AC bias
Erasing system	Multi pole magnet
Monitor system	Variable sound monitor
Frequency range	
Normal	80–14,000 Hz

General

Power requirement	
AC	230~240 V, 50Hz
	Power consumption: 25 W
Battery	15 V (Ten R20/LR20, UM-1 batteries)
Memory back-up for computer	6 V (Four R6/LR6, UM-3 batteries)
Power output	60 W (30 W x 2)...PMPO
Speakers	2 Woofer; 12 cm
	2 Tweeter; 1.5 cm
Jacks	
Output	Speaker; 2.7~8 Ω
	Headphones; 32 Ω
Dimensions (WxHxD)	643 x 251 x 239 mm
	Main unit; 313 x 251 x 223 mm
	Speaker box; 170 x 240 x 201 mm
Weight	6.9 kg without batteries

Note:
Specifications are subject to change without notice.
Weight and dimensions are approximate.

MASH is a trademark of NTT.

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